

WHAT IS CLAIMED IS:

1. An optical recording apparatus for performing recording by irradiating a light beam emitted from a light source to a recording medium, comprising:

5 a light source driving portion for driving said light source;

an emitted light power detecting portion for detecting an emitted light power from said light source;

10 a temperature detecting portion for detecting a temperature of said light source;

a light power control portion for adjusting a driving current of said light source such that a change rate of an emitted light power detection value from said emitted light power detecting portion fall within a predetermined range; and

15 a detection value storing portion for storing a driving current adjustment value from said light power control portion and a temperature detection value from said temperature detecting portion in an associated manner,

20 wherein said light power control portion adjusts the driving current value of said light source based on an stored detection value in said detection value storing portion when the temperature detection value is within a range of temperature detection values already stored in said detection value storing portion.

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2. An optical recording apparatus according to claim 1, further comprising:

a correction coefficient storing portion for storing a correction coefficient for the driving current value corresponding to the temperature of said light source in advance,

5 wherein said light power control portion adjusts the driving current value of said light source by using the correction coefficient already stored in said correction coefficient storing portion when the driving current adjustment value corresponding to a current temperature detection value
10 is not stored in said detection value storing portion.

3. An optical recording apparatus according to claim 1, wherein:

said light power control portion computes an
15 interpolation value of the stored detection value to adjust the driving current of said light source based on the interpolation value.

4. An optical recording apparatus according to claim
20 1, further comprising:

a medium determining portion for determining whether the recording medium is newly loaded or not,

wherein said detection value storing portion updates the stored detection value with a new detection value when said
25 medium determining portion determines that the recording medium is newly loaded.

5. An optical recording apparatus for performing recording by irradiating a light beam emitted from a light source to a recording medium, comprising:

1 a light source driving portion for driving said light
5 source;

an emitted light power detecting portion for detecting an emitted light power from said light source;

a temperature detecting portion for detecting a temperature of said light source;

10 a light power control portion for adjusting a driving current of said light source driving portion to maintain the emitted light power from said light source substantially at a predetermined value, and

15 a detection value storing portion for storing a driving current adjustment value from said light power control portion and a temperature detection value from said temperature detecting portion in an associated manner,

wherein said light power control portion adjusts the driving current value of said light source based on an stored
20 detection value in said detection value storing portion when the temperature detection value is within a range of temperature detection values already stored in said detection value storing portion.

25 6. A recording method of an optical recording apparatus for performing recording by irradiating a light beam emitted from a light source to a recording medium, comprising:

light source driving step of driving said light source;
emitted light power detecting step of detecting an
emitted light power from said light source;

temperature detecting step of detecting a temperature of
5 said light source;

light power control step of adjusting a driving current
of said light source such that a change rate of an emitted light
power detection value in said emitted light power detecting step
fall within a predetermined range; and

10 detection value storing step of storing a driving current
adjustment value in said light power control step in association
with a temperature detection value obtained in said temperature
detecting step,

wherein said light power control step adjusts the driving
15 current of said light source based on an stored detection value
in said detection value storing step when the temperature
detection value is within a range of temperature detection
values already stored in said detection value storing step.

20 7. A method according to claim 6, further comprising:
correction coefficient storing step of storing a
correction coefficient for the driving current value
corresponding to the temperature of said light source in
advance,

25 wherein said light power control step adjusts the driving
current of said light source by using the correction coefficient
already stored in said correction coefficient storing step when

the driving current adjustment value corresponding to a current temperature detection value is not stored in said detection value storing step.

5 8. A method according to claim 6, wherein:

 said light power control step computes an interpolation value of the stored detection value to adjust the driving current of said light source based on the interpolation value.

10 9. A method according to claim 6 further comprising:
 medium determining step of determining whether the recording medium is newly loaded or not,

 wherein said detection value storing step updates the stored detection value with a new detection value when it is
15 determined that the recording medium is newly loaded in said medium determining step.

 10. A recording method of an optical recording apparatus for performing recording by irradiating a light beam emitted
20 from a light source to a recording medium, comprising:

 light source driving step of driving said light source;
 emitted light power detecting step of detecting an emitted light power from said light source;

 temperature detecting step of detecting a temperature of
25 said light source;

 light power control step of adjusting a driving current of said light source to maintain the emitted light power from

said light source substantially at a predetermined value, and

detection value storing step of storing a driving current adjustment value in said light power control step in association with a temperature detection value obtained in said temperature

5 detecting step,

wherein said light power control step adjusts the driving current of said light source based on an stored detection value when the temperature detection value is within a range of temperature detection values already stored in said detection

10 value storing step.